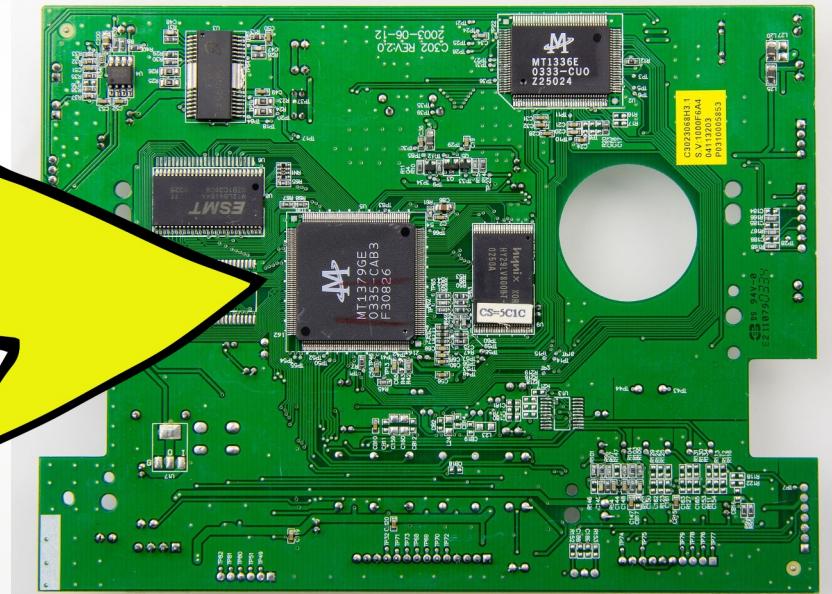
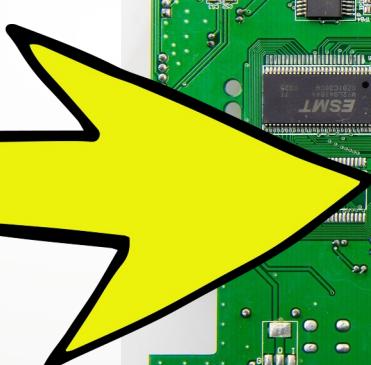


Cursus Kicad

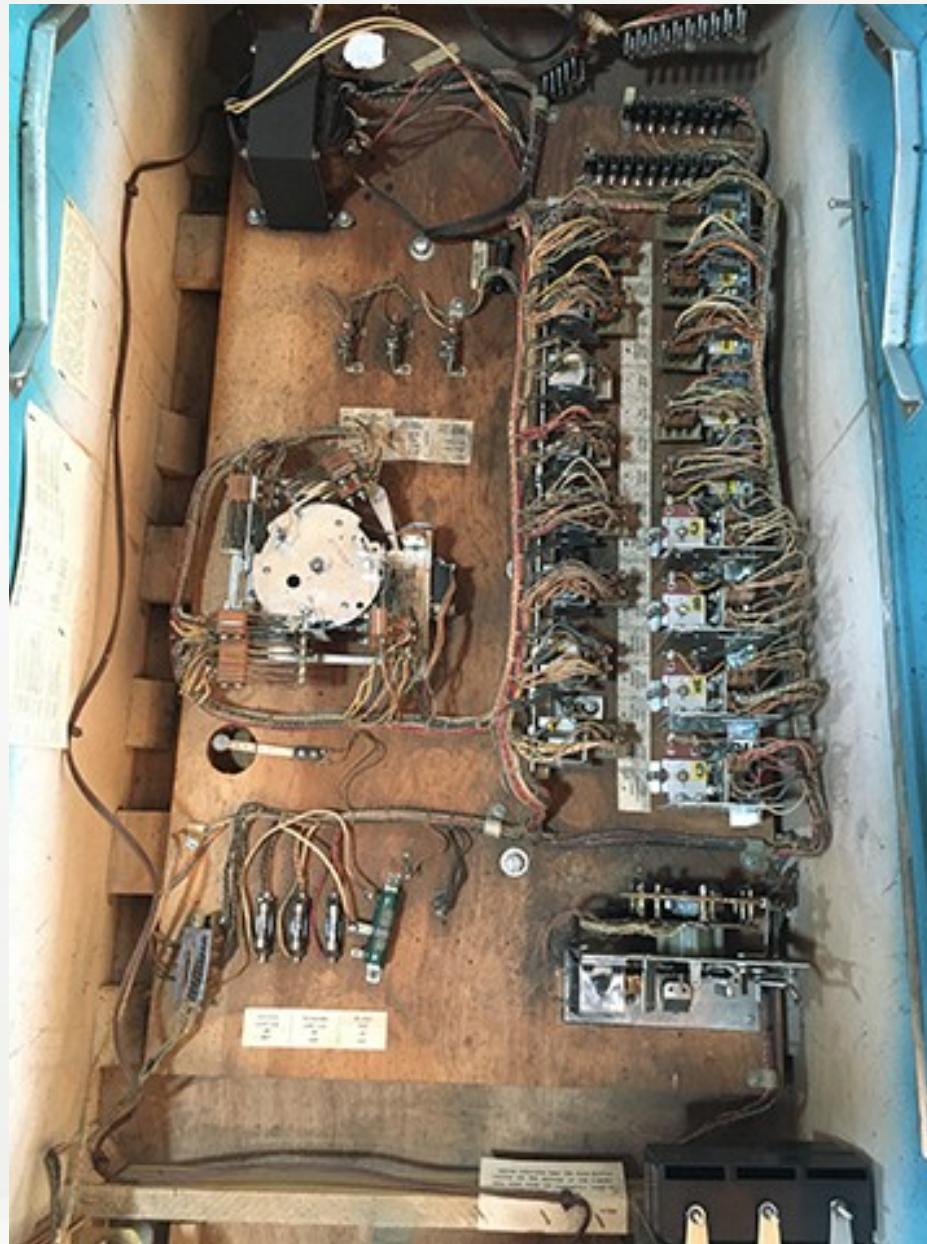
How to go from idea to product



A bit of history



A bit of history



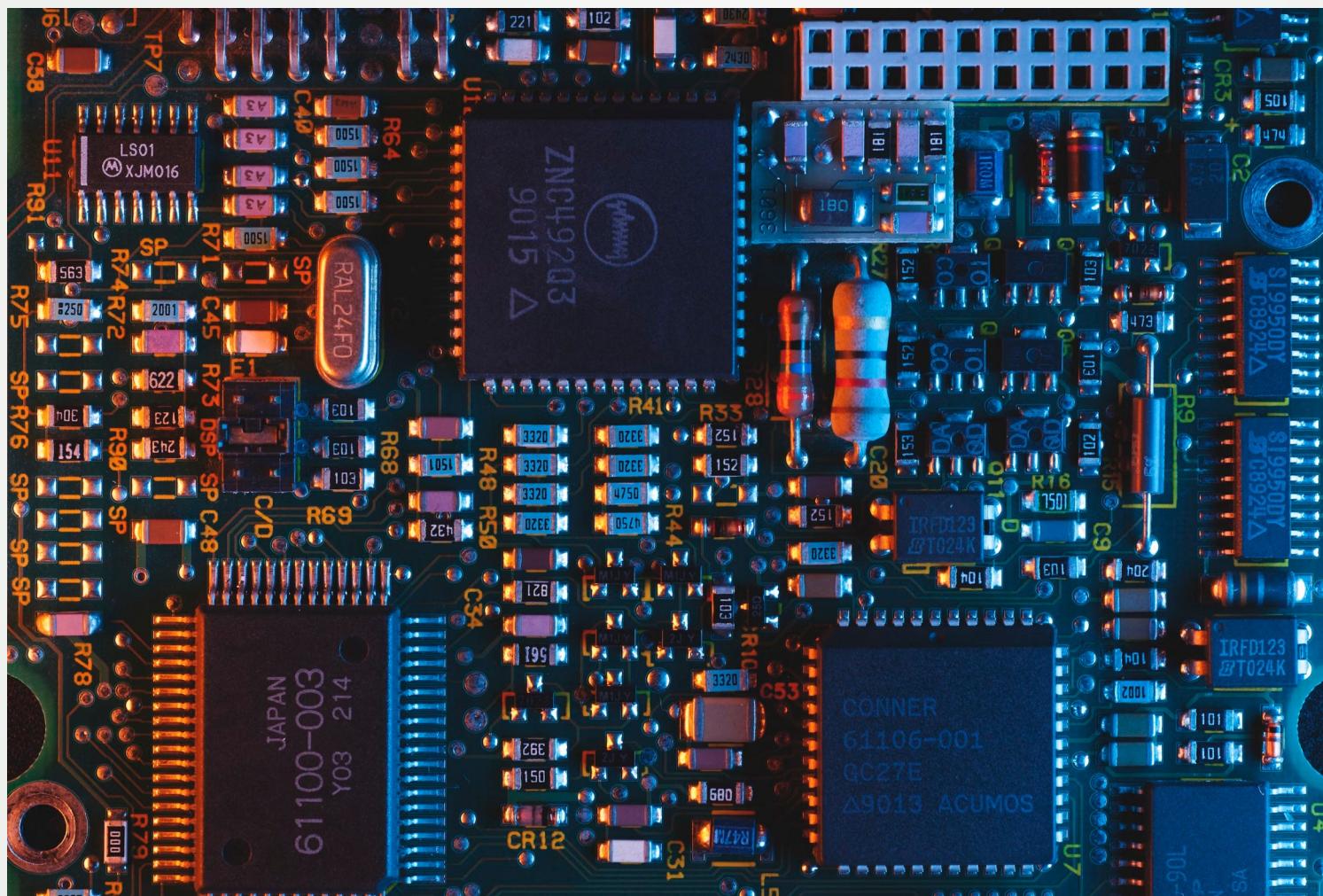
This
contains
logic

A bit of history



That includes these

Chips replaced the logic



Let start with your idea



Let start with your idea



Let start with your idea



Let start with your idea



Let start with your idea



- What does it needs?
- Usb?
- Leds?
- Sensors?
- Motors?
- Touch sensors?

Find a microcontroller that suits your needs

- What does it needs?
- Usb?
- Leds?
- Sensors?
- Motors?
- Touch sensors?

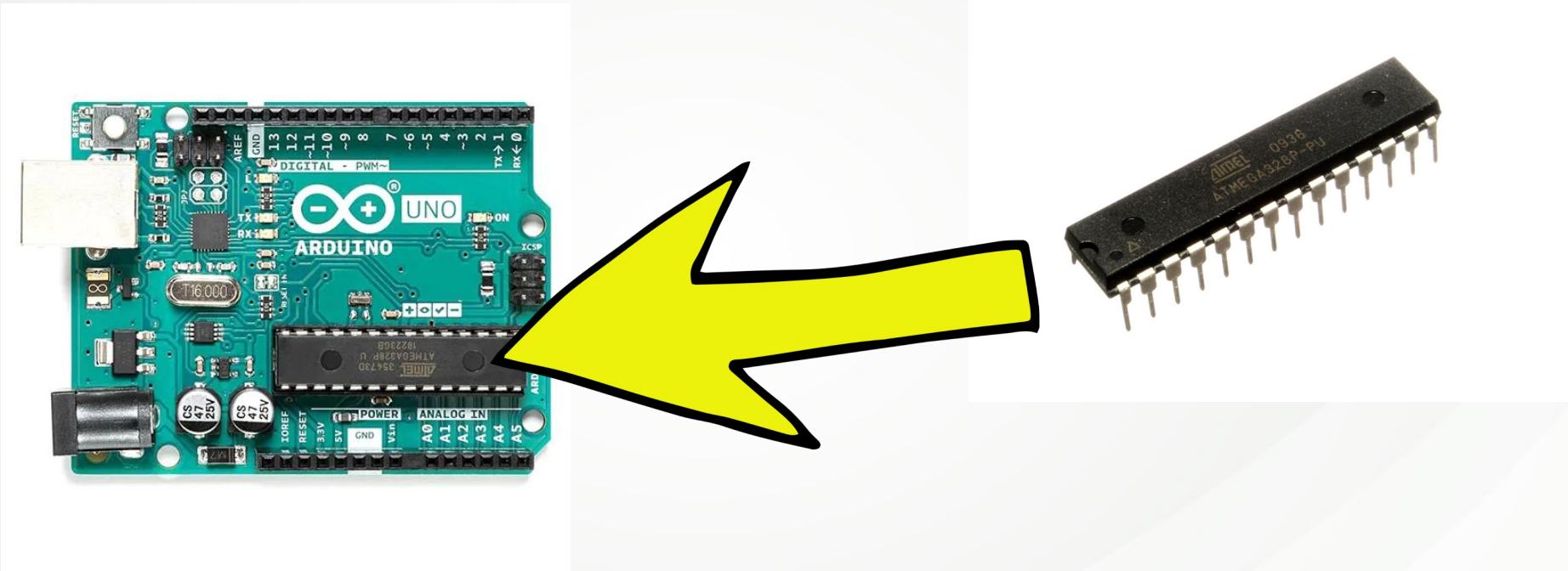


Find a microcontroller that suits your needs

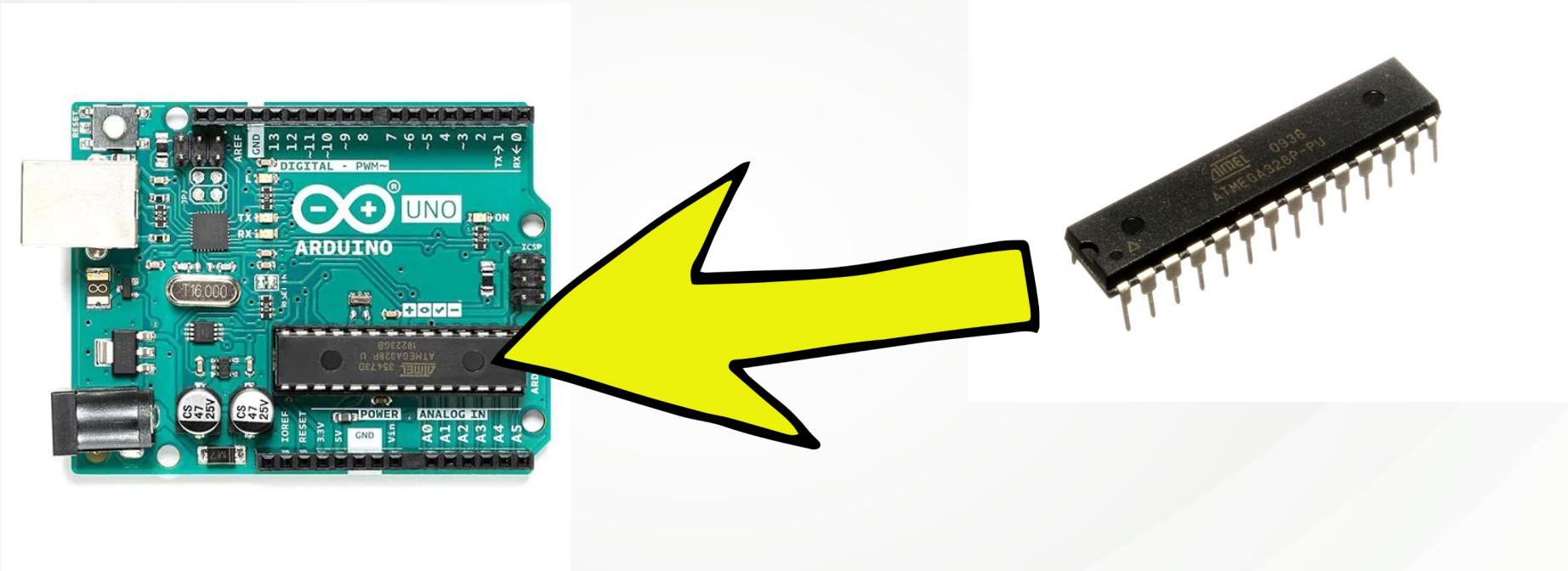
- What does it needs?
- Usb → USB compatible
- Leds → GPIO / PINout
- Sensors → ADC / digital in
- Motors → motor controller
- Touch sensors → Pin input



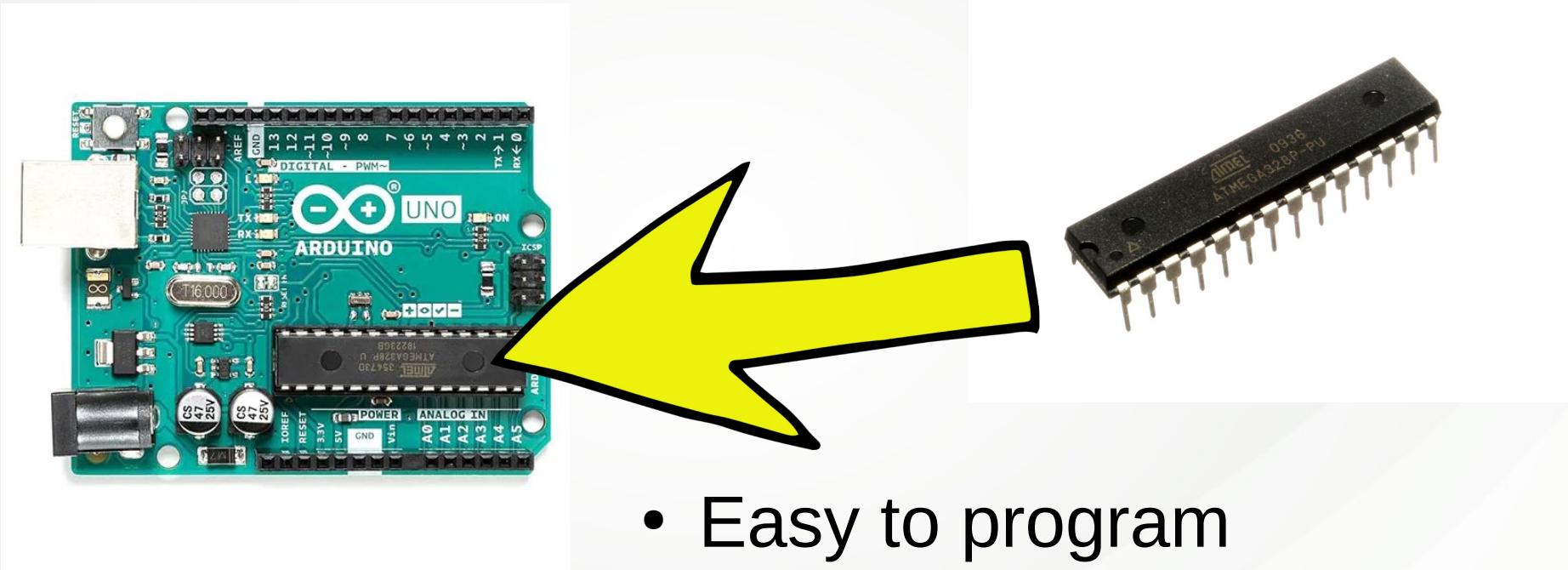
Find a microcontroller that suits your needs



Find a microcontroller that suits your needs



Step 1: prototyping



- Easy to program
- Easy to prototype with

Step 1: prototyping

Blink | Arduino 1.8.19

File Edit Sketch Tools Help

Blink

```
/*
Blink

Turns an LED on for one second, then off for one second, repeatedly.

Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
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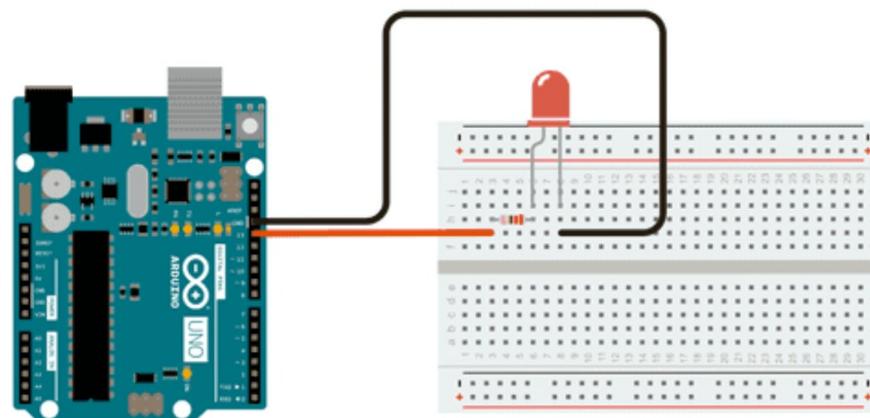
modified 8 May 2014
by Scott Fitzgerald
modified 2 Sep 2016
by Arturo Guadalupi
modified 8 Sep 2016
by Colby Newman

This example code is in the public domain.

https://www.arduino.cc/en/Tutorial/BuiltInExamples/Blink
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// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH);    // turn the LED on (HIGH is the voltage level)
  delay(1000);                      // wait for a second
  digitalWrite(LED_BUILTIN, LOW);     // turn the LED off by making the voltage LOW
  delay(1000);                      // wait for a second
}
```

G1 Disabled, Disabled, UART0 / Hardware CDC, Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS), 240MHz (WiFi), 921600, None



Step 1: prototyping

Blink | Arduino 1.8.19

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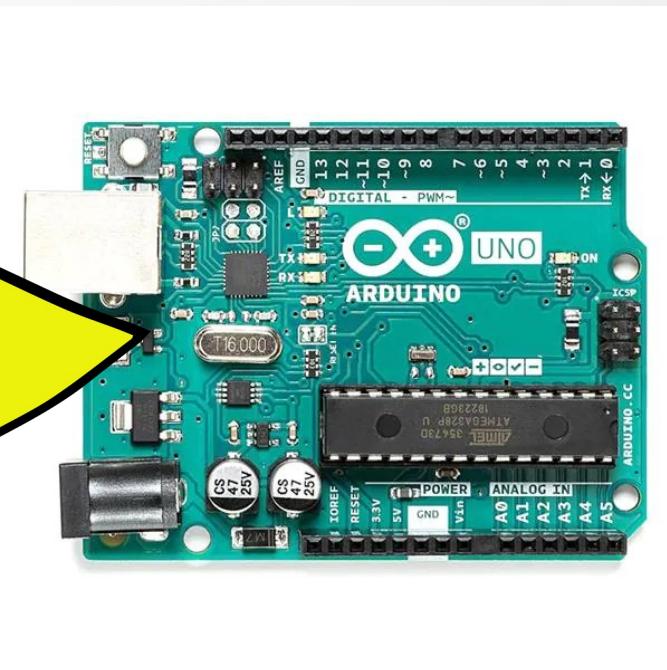
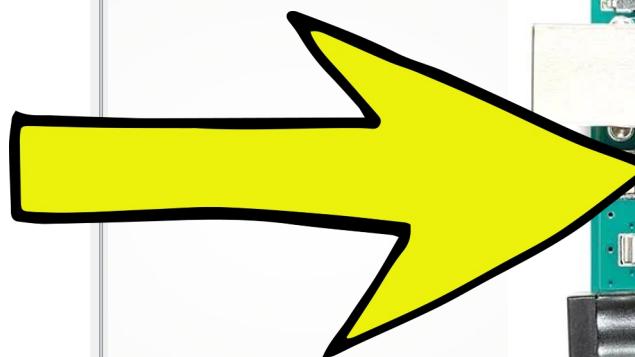
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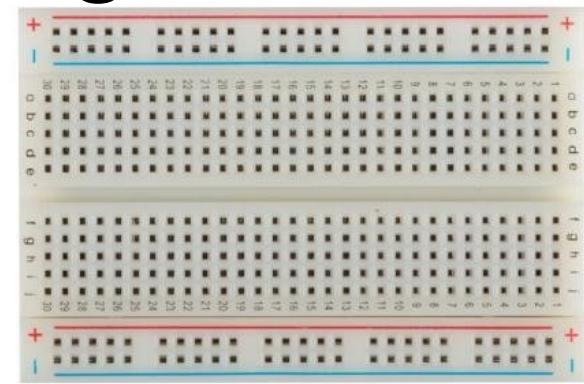
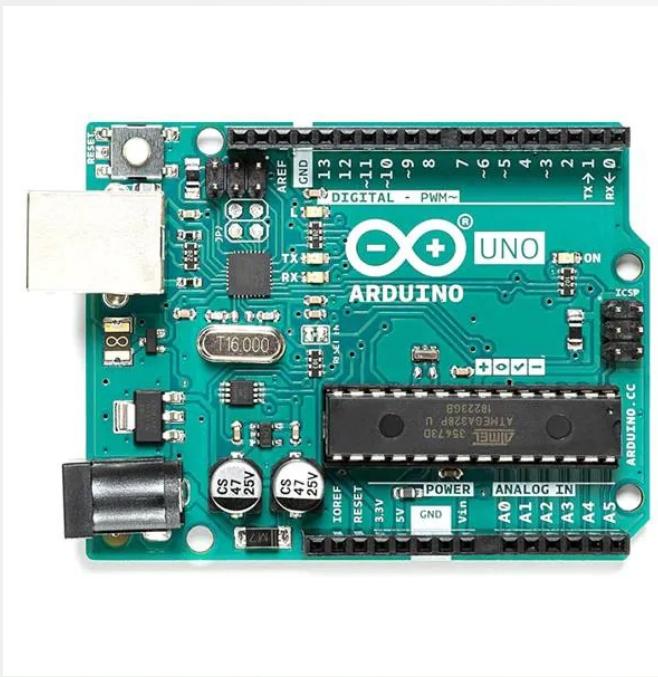
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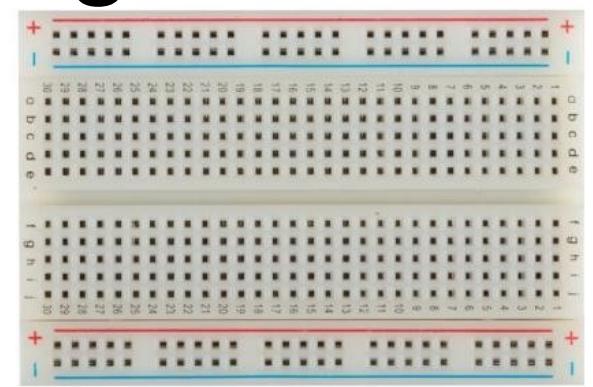
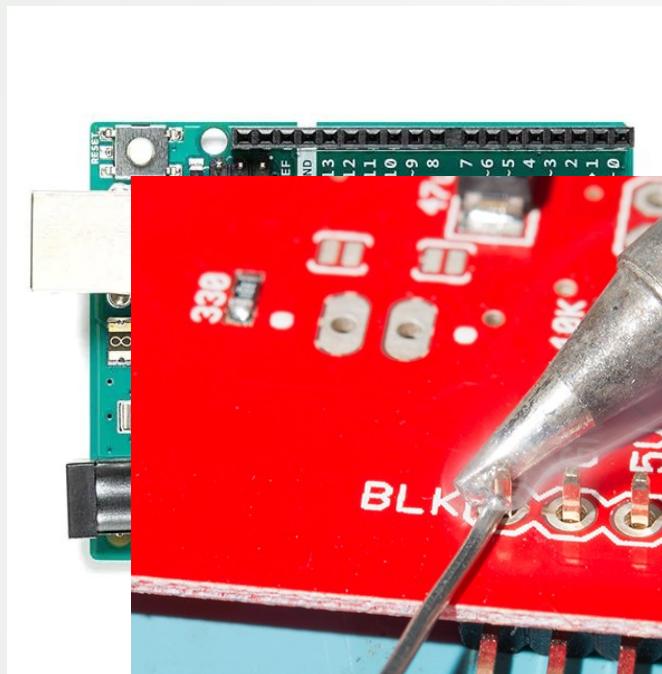


Step 1: prototyping

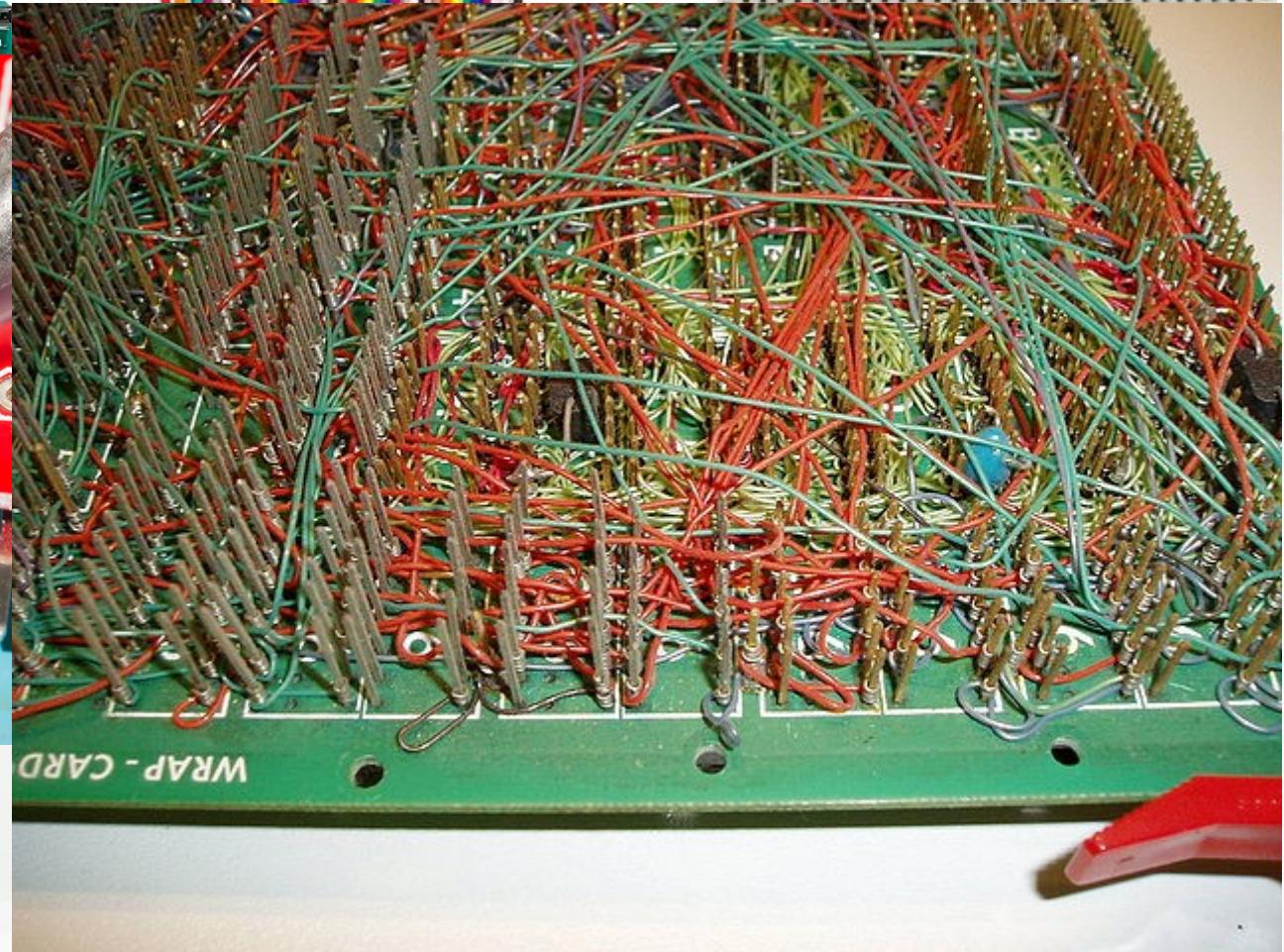
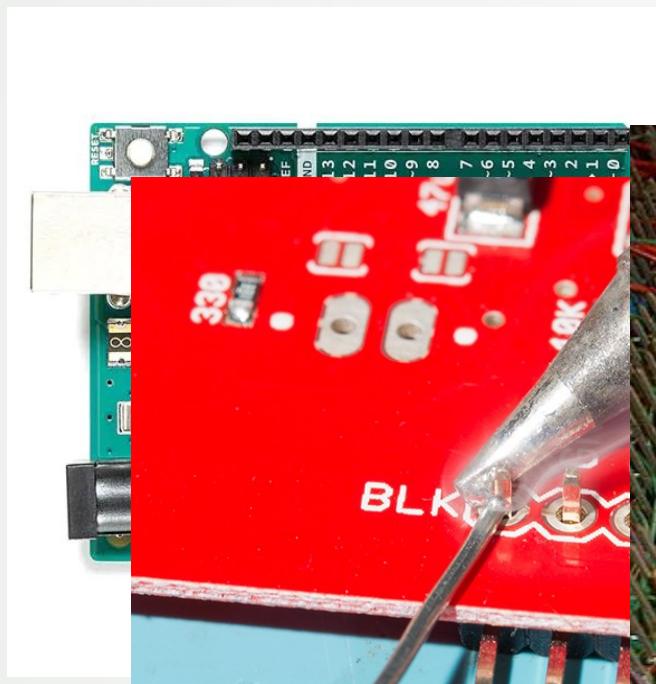


MALE TO FEMALE

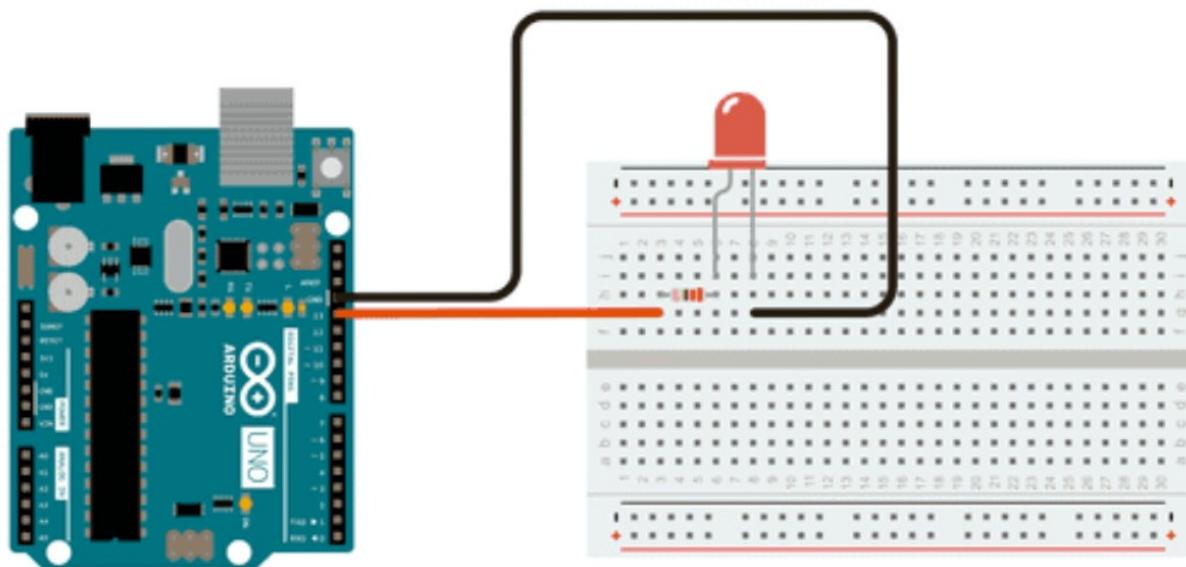
Step 1: prototyping



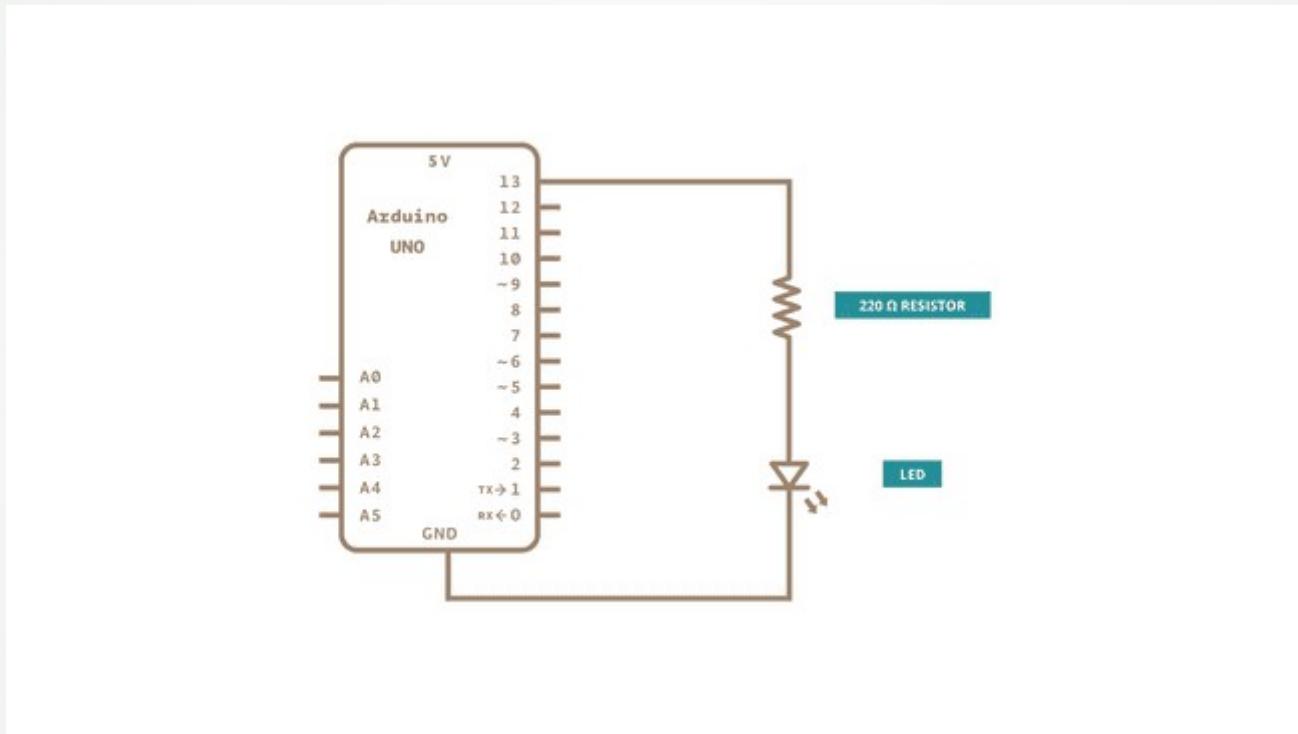
Step 1: prototyping



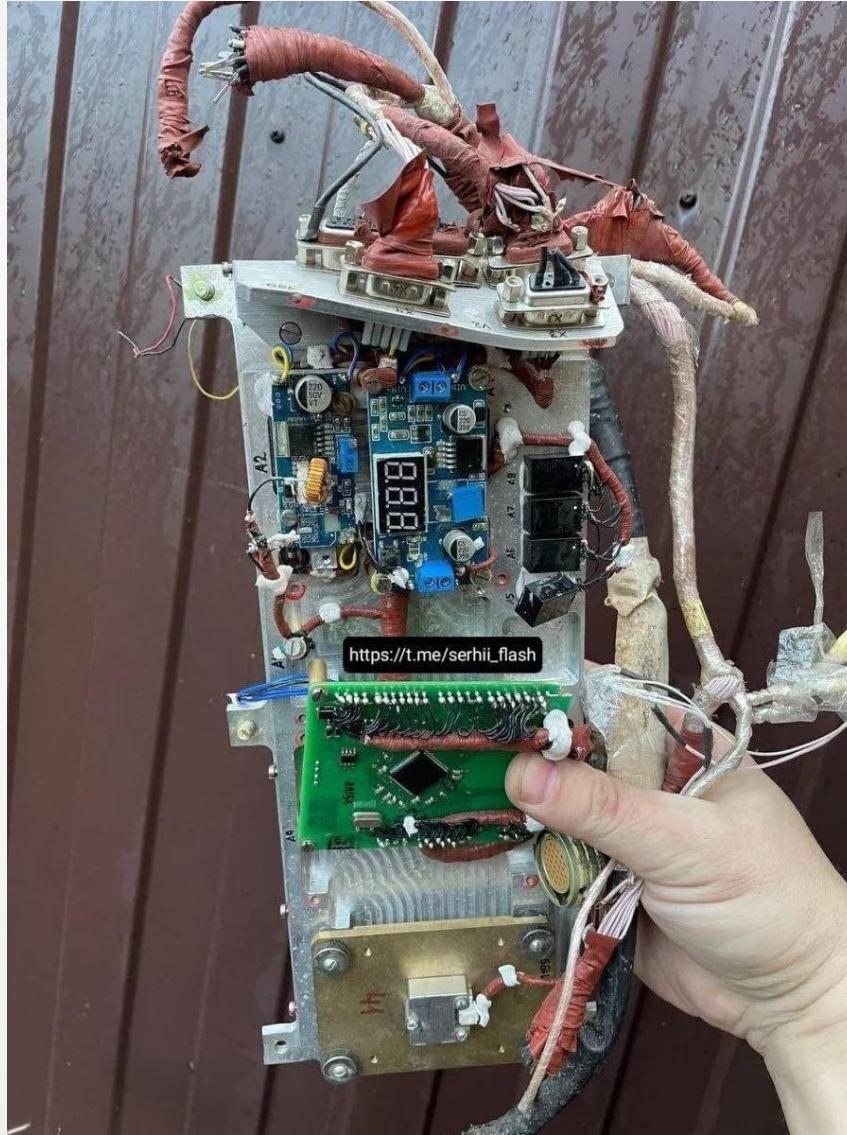
Step 1: prototyping



Step 1: prototyping



Product of prototyping

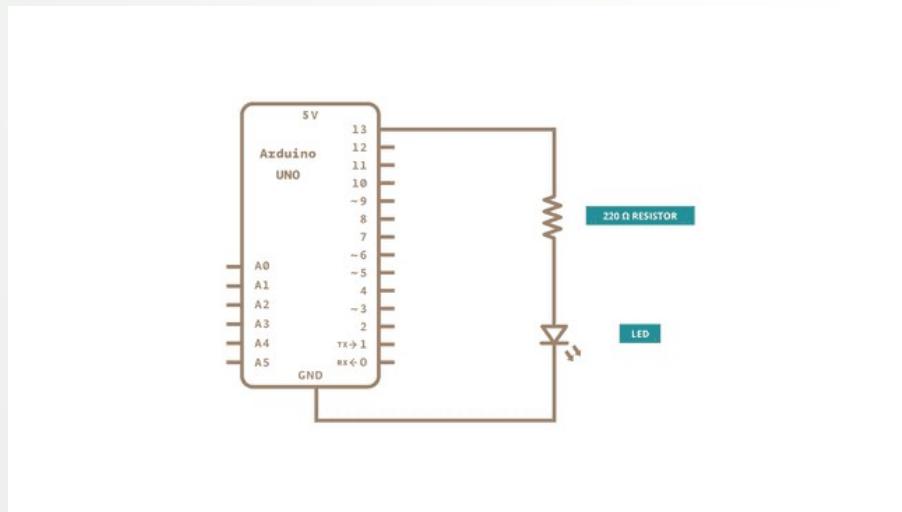


Product of prototyping



Product of prototyping

- Working schematic
- Working code



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File Edit Sketch Tools Help
Blink
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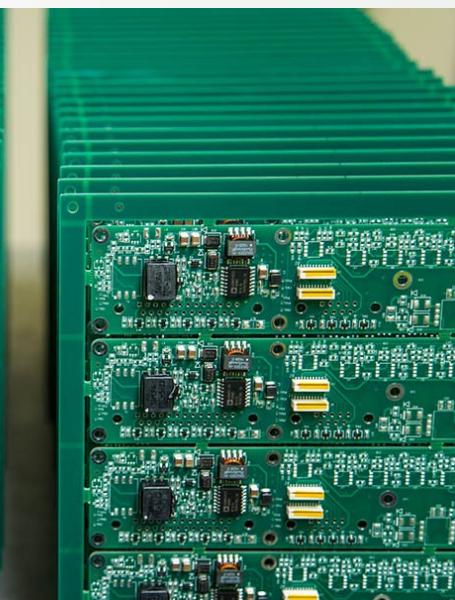
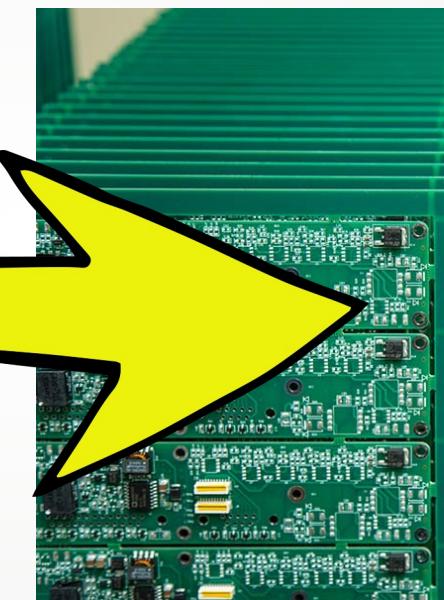
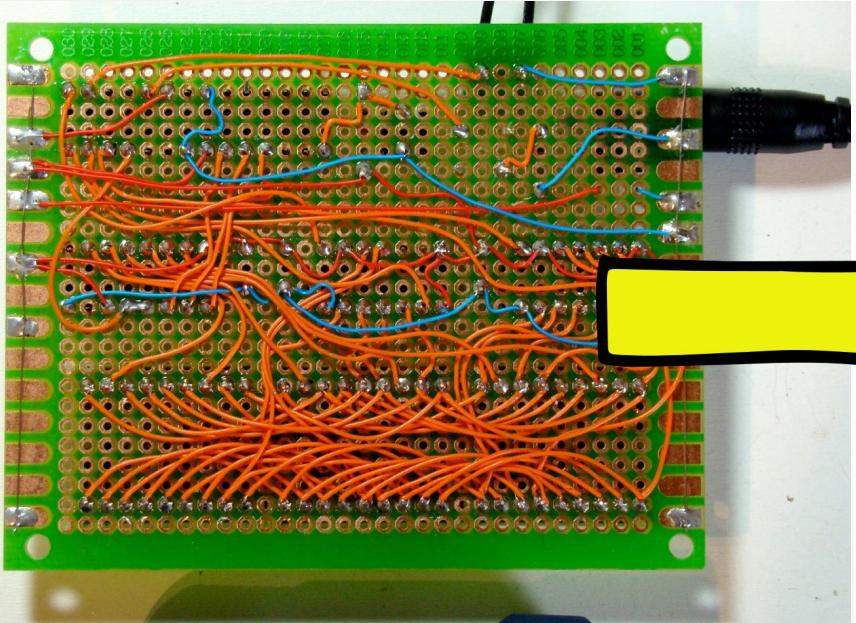
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```



Step 2: Kicad



Step 2: Schematic editor

Step 2: Symbol / Footprint Editor

Step 2: PCB Editor

- Import from schematic
-
- Layers(enter schrek meme here)

Step 3: Export

- Gerberfiles
- Pick and place
- Bom
- Kicad PCB file

Order

- JLC PCB
- Handsolder vs Let it be produced for you

Beautify your pcb

SVG Magic

- As layer
- Layer used for other designs
- Use the back of PCB
- Gold plating
-

Features

- Text based, só git compatible
- Kibot